

WHAT IS CLAIMED IS:

1. A power supply device for driving which comprises a switching control circuit on a primary side of a transformer, which switches a switching element for a power source, and an output voltage generation portion on a secondary side of the transformer, which generates a predetermined output voltage in accordance with the switching of the switching element for the power source, wherein

the output voltage generation portion includes an overvoltage detection circuit that detects an overvoltage; and

the switching control circuit includes an output voltage suppression processing unit that suppresses an increase in the output voltage when the overvoltage is detected.

2. The power supply device for driving according to claim 1, wherein the output voltage generation portion includes a plurality of phase power supply circuits that generate a plurality of output voltages, and the overvoltage detection circuit is provided in each phase power supply circuit.

3. The power supply device for driving according to claim 1, wherein the switching control circuit includes a duty control portion that switches the switching element for the power source according to a predetermined duty signal, and the output voltage suppression processing unit is provided in the duty control portion and executes control such that the duty of the duty signal becomes smaller when the overvoltage is detected.

4. The power supply device for driving according to claim 2, wherein the switching control circuit includes a duty control portion that switches the switching element for the power source according to a predetermined duty signal, and the output voltage suppression processing unit is provided in the duty control portion and executes control such that the duty of the duty signal becomes smaller when the overvoltage is detected.

5. The power supply device for driving according to claim 1, comprising an overvoltage signal generation portion that generates an overvoltage signal when the overvoltage is detected, and sends the overvoltage signal to the switching control circuit.

6. The power supply device for driving according to claim 2, comprising an overvoltage signal generation portion that generates an overvoltage signal when the overvoltage is detected, and sends the overvoltage signal to the switching control circuit.

7. The power supply device for driving according to claim 3, comprising an overvoltage signal generation portion that generates an overvoltage signal when the overvoltage is detected, and sends the overvoltage signal to the switching control circuit.

8. The power supply device for driving according to claim 4, comprising an overvoltage signal generation portion that generates an overvoltage signal when the overvoltage is detected, and sends the overvoltage signal to the switching control circuit.